



NIH AIDS Reagent Program

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DATA SHEET

Reagent: Anti-Human CXCR4 Monoclonal (44717)

Catalog Number: 4083

Lot Number: 140143

Release Category: A

Provided: 100 µg (1 mg/mL) purified protein, resuspended in PBS.

Description: This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with hCXCR4 transfected mouse 3T3 cells. The IgG fraction of ascites fluid was purified by Protein G affinity chromatography. CXCR4 is a G-protein-linked seven transmembrane spanning receptor that binds stromal cell-derived factor-1 (SDF-1). CXCR4 acts as a co-factor for T-cell tropic HIV-1 and -2 viral entry into cells.

Selected for ability to react in FACS specifically with human and non-human cells expressing human CXCR4. Also react with cells expressing feline but not rat CXCR4. Not cross-reactive with other chemokine receptors.

Use at 10 µg/ml for flow cytometry and IFA. Half-maximal inhibition of cell-surface CXCR4-mediated SDF-1/PBSF response occurs at 5-25 µg/ml antibody in the presence of 1 ng/ml rhSDF-1a (chemotaxis assay).

Host: Balb/c mouse splenocyte.

Special Characteristics: Specificity: human CXCR4 (fusin)
Applications: Flow Cytometry, Immunohistochemistry, Neutralization of bioactivity.

- Dilute this antibody to 10 µg/mL and add 10 µL of this solution to 10^5 - 10^6 cells in a reaction volume not exceeding 200 µL. CXCR4 exists in antigenically distinct conformations on many cell lines and primary cells. Monoclonal 44717 has been shown to recognize multiple CXCR4 conformations. The use of other CXCR4 monoclonals, like 12G5 and 4G10 which fail to recognize some conformational forms, can lead to an underestimation of the CXCR4 expression on cell surfaces.

ALL RECIPIENTS OF THIS MATERIAL MUST COMPLY WITH ALL APPLICABLE BIOLOGICAL, CHEMICAL, AND/OR RADIOCHEMICAL SAFETY STANDARDS INCLUDING SPECIAL PRACTICES, EQUIPMENT, FACILITIES, AND REGULATIONS. NOT FOR USE IN HUMANS.

•This antibody will detect CXCR-4 in cells. The working dilution is 25 µg/mL. Detection may be done using indirect immunofluorescence.

•The exact concentration of antibody required to neutralize the human cell surface CXCR-4 mediated bioactivity is dependent on the SDF-1/PBSF concentration, as well as on the number of CXCR-4 receptors present on the cell surface (a function of cell type and culture conditions). To provide a guideline, R&D Systems has determined the neutralization dose for this antibody under a specific set of conditions. The Neutralization Dose50 (ND50) for this antibody is defined as that concentration of antibody required to yield one-half maximal inhibition of the cell surface CXCR-4 mediated SDF-1/PBSF response on a responsive cell line, at a specific SDF-1/PBSF concentration.

Commercially available at R&D Systems (Cat# MAB173)

Recommended Storage:	Keep at 4°C for short term storage and -80°C for long term storage. Avoid freeze-thaw cycles as reagent degradation may result.
Contributor:	DAIDS, NIAID
Isotype:	IgG _{2b}
References:	Endres MJ, et al. Cell 87:745, 1996.
NOTE:	Acknowledgement for publications should read "The following reagent was obtained through the NIH AIDS Reagent Program, Division of AIDS, NIAID, NIH: Anti-Human CXCR4 Monoclonal (44717)."
Last Updated	August 31, 2018

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